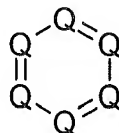


AMENDMENTS TO THE CLAIMS

1. (Previously presented) Organic electroluminescent device comprising an anode, a cathode and an emission layer, consisting of at least one matrix material which is doped with at least one phosphorescent emitter, characterised in that a hole-blocking layer which comprises a compound of the formula (1)



(Formula 1)

where the following applies to the symbols and indices used:

- Q is on each occurrence, identically or differently, N or CR, with the proviso that at least two and a maximum of four Q stand for nitrogen;
- R is on each occurrence, identically or differently, H, NO₂, CN, N(R¹)₂, a straight-chain, branched or cyclic alkyl or alkoxy group having 1 to 40 C atoms, in which one or more non-adjacent CH₂ groups may be replaced by -R¹C=CR¹-, -C≡C-, Si(R¹)₂, Ge(R¹)₂, Sn(R¹)₂, -O-, -S- or -NR¹- and in which one or more H atoms may be replaced by F or an aromatic group R¹, or
- an aromatic or heteroaromatic ring system or an aryloxy or heteroaryloxy group, each having 1 to 40 aromatic C atoms, in which one or more H atoms may be replaced by F, Cl, Br or I or which may be substituted by one or more non-aromatic radicals R; a plurality of substituents R here may define a further mono- or polycyclic, aliphatic or aromatic ring system, or an aromatic or heteroaromatic ring system bonded via a divalent group -Z- or an aryloxy or heteroaryloxy group, each having 1 to 40 aromatic C atoms, in which one or more H atoms may be replaced by F, Cl, Br or I or which may be substituted by one or

more non-aromatic radicals R; a plurality of substituents R here may define a further mono- or polycyclic, aliphatic or aromatic ring system;

R¹ is on each occurrence, identically or differently, H or an aliphatic, aromatic or heteroaromatic hydrocarbon radical having 1 to 20 C atoms, in which a plurality of substituents R¹ or R¹ with R may also define a further mono- or polycyclic, aliphatic or aromatic ring system;

Z is on each occurrence, identically or differently, a straight-chain, branched or cyclic, conjugated radical having 1 to 40 C atoms, which is optionally in conjugation with the two other substituents, where the number of atoms in Z which link the group of the formula (1) and the aromatic radical is an even number, where one or more non-adjacent C atoms may be replaced by -O-, -S- or -NR¹- or one or more C atoms may be substituted by a radical R¹ or halogen;

wherein in compounds of the formula (1), a 9,9'-spirobifluorene derivative, a 6,6- and/or 12,12-di- or tetrasubstituted indenofluorene derivative, a tetraarylmethane derivative or a triptycene derivative is present in at least one of the radicals R,

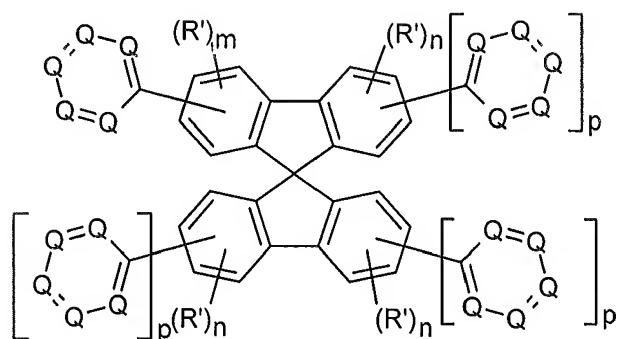
wherein the structure of the formula (1) is pyridazine, pyrazine, or 1,3,5-triazine,

with the proviso that R does not contain substituted or unsubstituted phenylpyridine, is incorporated between the emission layer and the cathode.

2. (Original) Organic electroluminescent device according to Claim 1, characterised in that a hole-injection layer and/or a hole-transport layer and/or an electron-injection layer and/or an electron-transport layer is present.

3. (Previously presented) Organic electroluminescent device according to Claim 1, characterised in that the hole-blocking layer comprises at least 50% of compounds of the formula (1).
4. (Original) Organic electroluminescent device according to Claim 3, characterised in that the hole-blocking layer consists only of compounds of the formula (1).
5. (Cancelled)
6. (Cancelled)
7. (Previously presented) Organic electroluminescent device according to claim 1, characterised in that the hole-blocking material comprises more than one unit of the formula (1).
8. (Previously presented) Organic electroluminescent device according to claim 1, characterised in that the molecules of the hole-blocking material have a non-planar structure.
9. (Original) Organic electroluminescent device according to Claim 8, characterised in that at least one substituent R in the hole-blocking material contains at least one sp^3 -hybridised carbon atom.
10. (Original) Organic electroluminescent device according to Claim 9, characterised in that the sp^3 -hybridised carbon atom is a quaternary carbon atom.
11. (Cancelled)
12. (Previously presented) Organic electroluminescent device according to Claim 1, characterised in that in compounds of the formula (1), a 9,9'-spirobifluorene derivative is present in at least one of the radicals R.
13. (Previously presented) Organic electroluminescent device according to claim 1, characterised in that the glass transition temperature of the compounds of the formula (1) is $> 100^\circ\text{C}$.
14. (Previously presented) Organic electroluminescent device according to claim 1, characterised in that the layer thickness of the hole-blocking layer is 1 to 50 nm.

15. (Previously presented) Organic electroluminescent device according to claim 1, characterised in that the matrix for the phosphorescent emitter is selected from the classes of carbazoles, ketones, imines, phosphine oxides, phosphine sulfides, phosphine selenides, phosphazenes, sulfones, sulfoxides, silanes, polypodal metal complexes or oligophenylenes based on spirobifluorenes.
16. (Previously presented) Organic electroluminescent device according to claim 1, characterised in that the phosphorescent emitter is a compound which contains at least one element having an atomic number of greater than 36 and less than 84.
17. (Previously presented) Organic electroluminescent device according to Claim 16, characterised in that the phosphorescent emitter contains at least one element selected from the elements consisting of molybdenum, tungsten, rhenium, ruthenium, osmium, rhodium, iridium, palladium, platinum, silver, gold and europium.
18. (Previously presented) Organic electroluminescent device according to claim 1, characterised in that one or more layers are coated by a sublimation process.
19. (Previously presented) Organic electroluminescent device according to claim 1, characterised in that one or more layers are coated by the OVPD (organic vapour phase deposition) process or with the aid of carrier-gas sublimation.
20. (Previously presented) Organic electroluminescent device according to claim 1, characterised in that one or more layers are coated by a printing process.
21. (Previously presented) An electronic device which comprises the organic electroluminescent device as claimed in claim 1, wherein the electronic device is an organic transistor, organic integrated circuit, organic solar cell, organic laser diode or photoreceptor.
22. (Currently Amended) A compound of the formula (2) comprising at least one 9,9'-spirobifluorene unit, characterised in that at least one 1,3,5-triazine unit is bonded to the 9,9'-spirobifluorene



Formula (2)

wherein

R is on each occurrence, identically or differently, H, NO₂, CN, N(R¹)₂, a straight-chain, branched or cyclic alkyl or alkoxy group having 1 to 40 C atoms, in which one or more non-adjacent CH₂ groups may be replaced by -R¹C=CR¹-, -C≡C-, Si(R¹)₂, Ge(R¹)₂, Sn(R¹)₂, -O-, -S- or -NR¹- and in which one or more H atoms may be replaced by F or an aromatic group R¹, or

an aromatic or heteroaromatic ring system or an aryloxy or heteroaryloxy group, each having 1 to 40 aromatic C atoms, in which one or more H atoms may be replaced by F, Cl, Br or I or which may be substituted by one or more non-aromatic radicals R; a plurality of substituents R here may define a further mono- or polycyclic, aliphatic or aromatic ring system, or an aromatic or heteroaromatic ring system bonded via a divalent group -Z- or an aryloxy or heteroaryloxy group, each having 1 to 40 aromatic C atoms, in which one or more H atoms may be replaced by F, Cl, Br or I or which may be substituted by one or more non-aromatic radicals R; a plurality of substituents R here may define a further mono- or polycyclic, aliphatic or aromatic ring system;

R^1 is on each occurrence, identically or differently, H or an aliphatic, aromatic or heteroaromatic hydrocarbon radical having 1 to 20 C atoms, in which a plurality of substituents R^1 or R^1 with R may also define a further mono- or polycyclic, aliphatic or aromatic ring system;

Q is on each occurrence, identically or differently, N or CR , ~~with the proviso that three Q stand for nitrogen and two Q stand for $CR-CR^{10}$, with the proviso that three Q stand for nitrogen and two Q stand for CR^{10} ;~~

R^{10} is on each occurrence, identically or differently, H, NO_2 , CN, a straight-chain, branched or cyclic alkyl or alkoxy group having 1 to 40 C atoms, in which one or more non-adjacent CH_2 groups may be replaced by $-R^1C=CR^1-$, $-C\equiv C-$, $Si(R^1)_2$, $Ge(R^1)_2$, $Sn(R^1)_2$, $-O-$, $-S-$ or $-NR^1-$ and in which one or more H atoms may be replaced by F or an aromatic group R^1 , or an aromatic or heteroaromatic ring system or an aryloxy or heteroaryloxy group, each having 1 to 40 aromatic C atoms, in which one or more H atoms may be replaced by F, Cl, Br or I or which may be substituted by one or more non-aromatic radicals R^{10} ; a plurality of substituents R^{10} here may define a further mono- or polycyclic, aliphatic or aromatic ring system, or an aromatic or heteroaromatic ring system bonded via a divalent group $-Z-$ or an aryloxy or heteroaryloxy group, each having 1 to 40 aromatic C atoms, in which one or more H atoms may be replaced by F, Cl, Br or I or which may be substituted by one or more non-aromatic radicals R^{10} ; a plurality of substituents R^{10} here may define a further mono- or polycyclic, aliphatic or aromatic ring system;

R^2 is on each occurrence, identically or differently, R or F, Cl, Br, I, $B(R^1)_2$ or $B(OR^1)_2$;

- m is on each occurrence, identically or differently, 0, 1, 2 or 3;
- n is on each occurrence, identically or differently, 0, 1, 2, 3 or 4, with the proviso that n must not be 4 if $p = 1$;
- p is on each occurrence, identically or differently, 0 or 1.

23. (Cancelled)

24. (Previously presented) The compound according to Claim 22, characterised in that the following applies to the symbols and indices:

R is on each occurrence, identically or differently, an aromatic or heteroaromatic ring system having 1 to 10 aromatic C atoms, which may be substituted by one or more non-aromatic radicals R, where a plurality of substituents R, both on the same ring and also on different rings, may together in turn define a further mono- or polycyclic, aliphatic or aromatic ring system;

R' is on each occurrence, identically or differently, R, a straight-chain, branched or cyclic alkyl group having 1 to 10 C atoms, in which one or more non-adjacent CH_2 groups may be replaced by $-\text{R}^1\text{C}=\text{CR}^1-$, $-\text{C}\equiv\text{C}-$, $\text{Si}(\text{R}^1)_2$, $\text{Ge}(\text{R}^1)_2$, $\text{Sn}(\text{R}^1)_2$, $-\text{O}-$, $-\text{S}-$ or $-\text{NR}^1-$, or Br, I or $\text{B}(\text{OR}^1)_2$;

m is on each occurrence equal to 0;

n is on each occurrence, identically or differently, 0 or 1;

the further symbols and indices are as defined above under formulae (1) and (2).

25. (Previously presented) The compound according to claim 22, characterised in that two triazine units are present, both bonded to the same fluorene sub-unit of the spirobifluorene.
26. (Previously presented) Polymers or dendrimers comprising one or more compounds according to claim 22.

27. (Cancelled)
28. (Previously presented) Electronic device comprising at least one compound, polymer or dendrimer according to claim 22.
29. (Original) Electronic device according to Claim 28, characterised in that it is an organic light-emitting diode, an organic solar cell, an organic transistor, an organic integrated circuit, an organic laser diode or an organic photoreceptor.
30. (Previously presented) Organic electroluminescent device according to claim 1, wherein Z is on each occurrence, identically or differently, a straight-chain, branched or cyclic, conjugated radical having 1 to 40 C atoms, which is in conjugation with the two other substituents, where the number of atoms in Z which link the group of the formula (1) and the aromatic radical is an even number, where one or more non-adjacent C atoms may be replaced by -O-, -S- or -NR¹- or one or more C atoms may be substituted by a radical R¹ or halogen.
31. (Cancelled)